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Washington Highlights

United States Army engineers and Coast Guard officials are taking steps to protect shipping from oil development activities on the Continental Shelf in the Gulf of Mexico.

The House Small Business Committee, which for some time has been conducting field hearings on complaints of exclusive dealing oil industry marketing, will hold its final hearing here this month. Congressman Ploeser is chairman of the group.

The Federal Power Commission in the 12 months ending last June 30 authorized construction of 8468 miles of natural gas pipeline at an estimated cost of $519,000,000. One of the largest lines was a 1840-mile carrier from Texas to New York City. The Trans-Continental Gas Pipe Line Company proposes to supply through this line 340,000,000 cubic feet of gas daily to utilities in New York, New Jersey and Pennsylvania. The commission the year previously authorized 5369 miles. No stop in the expansion trend of gas lines throughout the country is expected in the foreseeable future. The commission now regulates more than 63,000 miles of pipelines used to carry gas in interstate commerce. Most of the gas is found in California, Texas, Louisiana, Oklahoma, Mississippi, New Mexico and Kansas.

The American Gas Association and the American Petroleum Institute estimated that as of the first of the current year there were 166 trillion cubic feet of gas in the country.

Walter S. Hallanan, chairman of the National Petroleum Council, has announced the appointment of a committee on petroleum industry manpower.

The committee was named particularly to study, estimate and report on the present manpower engaged in the petroleum industry and to consult with representatives of the National Resources Board, the Armed Services Petroleum Board, the Oil and Gas Division of the Interior Department and the Department of Labor. These consultations would be regarding the needs of a study of the essential manpower requirements of the petroleum industry during an emergency, if one should arise.

W. W. Vandeveer of Cleveland, Ohio, was designated chairman of the committee. California members of the group, include Sidney Belither, Shell Oil Company, Inc., S. A. Candee, Tide Water Associated Oil Company; Carl A. Johnson, Holly Development Company; W. M. Keck, Jr., Superior Oil Company; Kenneth Schaffer, Standard of California.

The U. S. Geological Survey has issued the fifth of a series of informal oil field reports. They were prepared to aid operators, public land and Indian land lessees seeking to apply secondary recovery methods to increase yield from their holdings.

Commerce Department records disclose the nation's business population at the close of 1947 at an all-time high of 3,796,000, more than double the average number at beginning of the century and nearly one-fifth more than in 1939.

The Armed Service Petroleum Purchasing Agency has made known its requirements for offshore shipments in the six-month period beginning next January 1. Purchases will include 13,456,000 barrels of aviation gasoline, 7,651,000 barrels of motor gasoline; 650,000 barrels of kerosene and 5,675 barrels of Navy Diesel oil. The oil will be procured equally from the West and Gulf Coasts. In addition, 1,817,000 barrels of Army Diesel oil will be obtained mainly from Gulf Coast points. Of the Navy's total requirements of 16,340,000 barrels of Navy special fuel oil, more than 10,000,000 barrels already have been contracted for, with the remaining 6,000,000 barrels in line for procurement on the Pacific Coast and in the Caribbean area. According to the Federal agency, fiscal year requirements for lubricating oils will approximate 65,000,000 gallons. This figure marks a reduction from a previous estimate of about 83,000,000 made by the agency last April.

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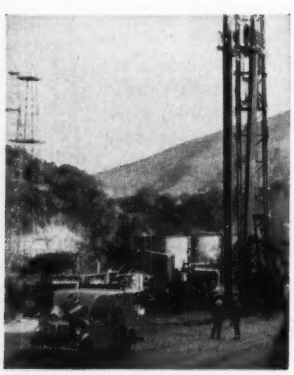

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Abstracts of Papers Delivered at the Annual Coast Meeting of AAPG, SEG and SEPM

GEOLOGY OF SANTA CRUZ ISLAND

William Rand, Union Oil Company, Santa Barbara, Calif.

Stratigraphy structure and surface geology of the island were discussed. Major faulting has separated the area into distinctive lithologic and structural provinces with individual characteristics which were described. Comparison of the geology of Santa Cruz Island with other regions was made.

RECENT DEVELOPMENTS IN THE SALINAS VALLEY

R. R. Thorup, Consultant, King City, Calif.

The discovery of oil in the Upper Miocene by The Texas Company at San Ardo in November, 1947, culminated 47 years of unsuccessful exploration and 91 dry holes. In the ensuing ten months (to October, 1948) an additional 38 wells have been drilled. These include three discoveries, 19 producing wells, 15 dry holes and four wells currently drilling.

Most of the post-discovery exploration has been directed to the Upper Miocene sands. Drilling is soon to be commenced in areas adjacent to the San Andreas fault and also west of the Salinas River for Middle Miocene sand objectives.

Three different pools have been discovered, and oil sands recently encountered by the Cleveland Oil Company north of San Ardo indicate the probability of a fourth pool. Oil sands on both sides of the King City fault suggest that the time of original accumulation was pre-King City fault.

Contours on top of the basement show a high basement area, nearly reaching the surface, extending south from San Lucas toward San Ardo on both sides of the Salinas River, and a steep basement slope along the present western edge of the Salinas Valley.

THE SAN ARDO OIL FIELD

Harry A. Campbell, Jergins Oil Company, Bakersfield, Calif.

The San Ardo oil field lies in and close to the foothills east of the Salinas River south of the town of San Ardo. The Lombardi pool lies at the north end of the field while the Campbell pool is at the south end. The Lombardi pool is limited by the dry holes on the north and east, while the limits of the Campbell pool are not established at this date. The first well to find oil sands east of the Salinas River was North American Oil Consolidated's Rosenberg No. 1, in Section 34, T. 22 S., R. 10 E. The discovery well for the San Ardo field was The Texas Company's Lombardi No. 1, completed in November, 1947. The discovery well for the Campbell pool was Jergins-North American's Orradre No. 1, Section 12, T. 23 S., R. 10 E. This well was completed as a 5000 MCF gas well in May, 1948.

SALINAS VALLEY MICROFAUNA

R. Stanley Beck, Consultant, Bakersfield, Calif.

Observations concerning some of the microfauna encountered in wells in the San Ardo oil field and adjacent wildcats in the Salinas Valley.

WEST AREA, TEJON RANCH OIL FIELD

L. C. Forrest, General Petroleum Corporation, Bakersfield, Calif.

This field was discovered by British-American Oil Producing Company and The Capital Company upon completion of Tejon No. 41-5, in Section 5, T. 10 N., R. 19 W., on December 14, 1945. Initial production on pump was 86 B/D of 15.5° gravity oil cutting 6% mud. At present there are 49 producing wells with a daily average production of

Left to right: Glen Gariepi, Herbert Hoover, Jr., Curtis Johnson.

Aden Hughes, president of the SEPM. Ursel Armstrong, secretary-treasurer, SEPM.

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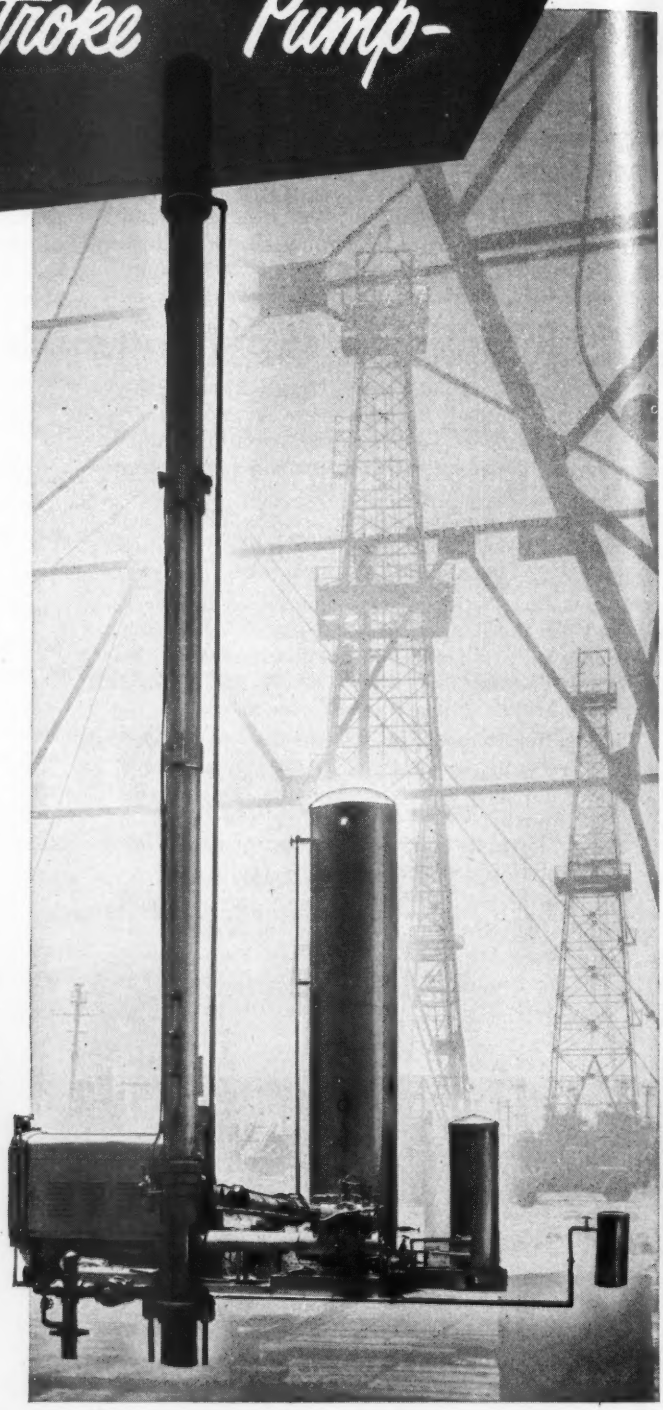

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approximately 2800 B/D of 16° gravity oil. Average completion depth is 2600 to 2700 feet. Maximum thickness of the producing sand, Chanac-Santa Margarita Transition (?), is 80 feet.

GEOLOGY OF THE HUNGRY VALLEY AREA, SOUTH OF GORMAN

John Crowell, University of California at Los Angeles, West Los Angeles, Calif.

During late Tertiary time a thick section of coarse and fine continental clastics accumulated in the northwestern part of the Ridge basin. Deposition was concurrent with movement on the San Gabriel fault which bounded Ridge basin on the southwest. Movement on this fault ceased in early Pleistocene (?) time and the younger sediments overlapped southwestward across the fault and onto a pediment cut into the basement. Later in the Pleistocene the low-angle Frazier Mountain thrust moved relatively southeastward across the veneer of sediments on the pediment and in part onto the thick Ridge basin deposits. Subsequently the thrust, veneer of sediments, and pediment were folded and faulted along an ENE-WSW trend.

RUSSELL RANCH OIL FIELD, CUYAMA VALLEY

Mason L. Hill, Richfield Oil Corporation, Bakersfield, Calif.

The Cuyama Valley, lying in the Coast Ranges midway between the San Joaquin and Santa Maria districts, was established as a commercial oil producing province by the completion of Richfield Oil Corporation's Russell No. 28-5, on June 13, 1948. This new field is known as the Russell Ranch oil field. It is situated in the western portion of the valley and is producing from Lower Miocene sands on fault closures. Previously less than a dozen holes and one small producer from Upper Miocene sand (Norris Oil Company's Cuyama No. 2) had been drilled in the valley.

Geologically the Cuyama Valley, between the Caliente and San Rafael uplifts, comprises granitic basement and Cretaceous to Pliocene strata folded and faulted in ESE trends. Eocene strata are present only in the eastern part of the valley, the Oligocene (?) is a red bed facies, 5000 feet of Lower Miocene sands pinch out southwestward, marine Miocene shales and sands grade eastward into red beds and the Pliocene strata are entirely non-marine.

Initial production of the discovery well, Richfield Oil Corporation's Russell No. 28-5, was 508 barrels per day, flowing, 38° gravity oil, from the interval 2970-3360 feet. This interval is Lower Miocene and has been designated the Dibblee zone. Five days later another pool was established two and one-quarter miles to the northwest by completion of Richfield Oil Corporation's Anderson No. 37-30, flowing 3041 barrels per day, 33.5° gravity oil, from the interval 2800-3019 feet, also Lower Miocene. The former, named the Russell area, had on October 1, 1948, eight completed wells with initial rates to 2500 barrels per day, and maximum sand interval of 350 feet. The latter, designated Whiterock area, had nine completed wells, with initial rates to 4000 barrels per day, and maximum sand interval of 480 feet. Also, on October 1, 1948, the Russell Ranch field had eight active development wells, while eight wildcats were drilling at locations as far as nine miles from production.

AIRBORNE MAGNETOMETER PROFILE ACROSS CUYAMA VALLEY

Wayne Hoylman, Fairchild Aerial Surveys, Incorporated, Los Angeles, Calif.

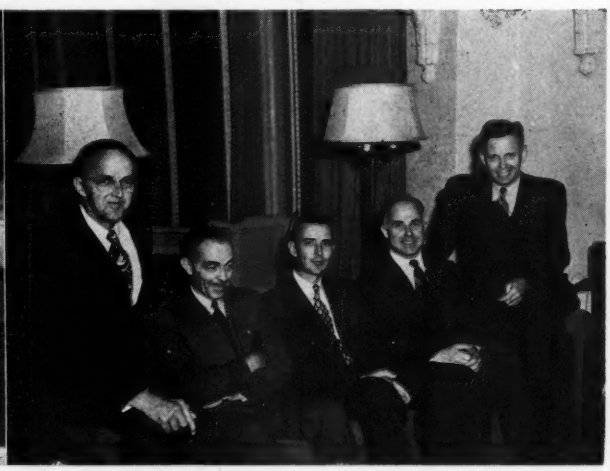
Several NE-SW airborne magnetometer profiles across the structural trends in the Cuyama Valley, Caliente Range and Carrizo Plains areas, including the Russell Ranch oil field, were shown in comparison with a geological cross section of the same areas with interpretative comments.

THE OCEANIC SAND

J. H. McMasters, Honolulu Oil Corporation, Bakersfield, Calif.

The Oceanic sand was named from its discovery as an oil producing zone in the Independent

Clifton Johnson, president AAPG, W. P. Winham, retiring president, AAPG; John E. Kilkenny, vice president, AAPG; Harold Rader, secretary-treasurer AAPG.



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Exploration Company's well Oceanic No. 1, Section 22, T. 29 S., R. 21 E., Cymric field, in 1945. Its stratigraphic position is in the Refugian stage of the Oligocene series, and it is correlated in general with the "Y" zone of North Belridge field and the Wagonwheel sand outcropping north and southwest of Wagonwheel Mountain in the Devils Den region. The limits of its areal distribution are rather loosely controlled except on the west, but in general they define a narrow band extending from Devils Den at least as far south as McKittrick.

The economic importance of the Oceanic sand has been established in the Belgian Anticline, Cymric, Bacon Hills and North Belridge fields, and continued exploration should develop other pools.

THE WEST MOUNTAIN OIL FIELD

Leo H. Moir, Jr., Wilshire Oil Company, Incorporated, Los Angeles, Calif.

The West Mountain oil pool is a part of the South Mountain oil field and is the most westerly dome on the anticlinal Oak Ridge uplift in Ventura County, California. Normal faulting separates this fold into three blocks, each with different productive capacities. The oldest beds outcropping on the structure are of Oligocene (?) Sespe age. Drilling has penetrated this formation which is divisible into an upper and lower part on the basis of lithology. Saturation is confined to bottom conglomeratic portion of the "upper" division and the upper 1500 feet of the "lower" division. A peculiarity of this "lower" division is the lenticular nature of the strata and their reaction to the waters normally used in the drilling muds. The Eocene beds have been penetrated, but the contact lacks sufficient lithological or foraminiferal character to determine the exact point of contact. Sands within this gradational zone show some saturation, but are as yet untested. At present, 27 wells drilled in this pool have proved at least 325 acres and have produced to date over 425,000 barrels of oil.

MAJOR ELEMENTS OF UTAH GEOLOGY AND CURRENT EXPLORATION PROGRAM

J. Stewart Williams, Utah State Agricultural College, Logan, Utah

A general discussion of the stratigraphy and structure of the sedimentary areas of that part of the Colorado Plateau and eastern Basin and Range province located in this state.

The current exploration program has already resulted in two discoveries, one by Equity Oil Company on the north limb of the Uinta basin and the other by The California Company near Escalante in the Kaiparowitz basin in the southwest part of the state.

POSSIBILITIES OF NEW STRATIGRAPHIC TRAP AREAS IN THE ROCKY MOUNTAIN REGION

Henry Carter Rea, Consultant, Casper, Wyoming

The Rocky Mountain region offers every type of structural and stratigraphic trap favorable for the accumulation of oil. The presence of many well defined surface anticlines has given the impression that this region is strictly a structural province and the stratigraphic trap has been relegated to a place of minor consideration.

Because of the profitable development of the Cretaceous sand traps along the east side of the Powder River basin of Wyoming, this type of accumulation will be elaborated on to indicate that where similar geologic conditions exist in other of the Rocky Mountain basins the same type of production can be expected.

Fundamental in this concept of sand trap accumulation is that structural considerations, as we know them, do not apply. To discuss the various theories on the origin, migration and accumulation of oil to account for this type of accumulation is to beg the question. The fact has to be recognized that the Cretaceous sands of the Rocky Mountain region are extremely lenticular and are capable of forming favorable traps for the accumualtion of oil due to

Curtis H. Johnson, retiring president, SEG; R. C. Dunlap, Jr., newly elected president, SEG; L. L. Nettleton, national president of SEG.

Olaf P. Jenkins, Chief, Division of Mines of the State of California; Mason Hill, Richfield Oil Corp., Bakersfield Division geologist; Cordell Durrell, Geology Department at UCLA.

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the lensing of the sand members themselves—on structure, on regional dip and in synclines.

To date no method, other than the drill, has been devised to isolate an oil-bearing sand lens with any degree of certainty that one will be found. This "punch-board" type of exploration and development drilling is frowned upon as being unscientific, but it has proved very profitable to many operators in the Powder River basin of Wyoming. From the economic standpoint it has several advantages in that very little preliminary geological work is required; because geophysics are of no aid in this problem they do not have to be considered; drilling depths can be chosen to suit the operator's equipment and finances; and finally, considerable latitude is offered in choosing a well site. Since there is no relationship between depth to the sand (if present) and production, the cost of exploring a sand lens area with wells 2000 feet in depth (or less) would be commensurate to a core drill program of similar depth.

To support the contention that accumulation of the type discussed is more dependent upon reservoir media than on structural considerations the following producing areas are cited:

1. The Shannon pool off the north plunge of Salt Creek, and the Bothwell syncline just west of the Salt Creek field.
2. The Dakota production in the Big Muddy field.
3. The Dakota production in the East Lance Creek field.
4. The Dakota production in the North Ant Hills area.
5. The Newcastle sand, Dakota and Lakota production in the Mule Creek field.
6. The Dakota production in the Bridge Creek area.
7. The Muddy or Newcastle sand production in the Mush Creek-Newcastle-Osage fields.
8. The Dakota production in the Lodgepole area.
9. The Frontier production in the Upton-Thornton area.
10. The Newcastle sand production in the Moorecroft area.

All of the above examples are in the Powder River basin of Wyoming.

In conclusion it should be mentioned that there are many other areas in the Rocky Mountain region where production of the type discussed can be obtained. It can be further stated that in any one of the Rocky Mountain basins where Cretaceous rocks are present the possibilities for sand trap accumulation exist.

RECENT DEVELOPMENTS IN CANADA

L. M. Clark, Barnsdall Oil Company, Calgary, Canada

Recent oil developments in Canada have been largely restricted to Alberta. Some exploratory work, including drilling, has been carried on in northeastern British Columbia, Saskatchewan, Manitoba, Ontario and the Maritime provinces. Geophysical exploration in Alberta has reached an all time high with forty seismographs, nine gravity meters, one magnetometer and a number of core drills and stratigraphic drills operating. This work has been largely concentrated in the Central Plains, although the Southern Plains and foothills are receiving considerable attention. Recent important discoveries, in addition to the Leduc oil field which produces oil from two dolomite zones in the Upper Devonian as well as from a Lower Cretaceous sand, include the Gulf Pincher Creek Mississippian limestone gas and condensate discovery in the southern foothills, and Imperial Redwater No. 1 well which appears to have found another Devonian oil field thirty miles northeast of Edmonton. Other recent finds include a small Lower Cretaceous sand discovery at Bantry jointly by California Standard and Imperial, several pool extensions in the Lloydminster oil field, a gas discovery in the Cretaceous Peace River sand of the Peace River district of northeastern British Columbia and northwestern Alberta by Pacific Petroleums Limited, and a small heavy oil discovery by Bata Petroleums near the Alberta-Saskatchewan boundary eighty miles south of Lloydminster in a Lower Cretaceous sand.

One hundred and thirty wells were drilled in Alberta during the first six months of 1948. Using the A.A.P.G. classification, there were one hundred and ten completions, seventy-four of which were field development and thirty-six exploratory wells. Five field development wells were dry holes. Considering the exploratory wells, five outpost wells were successful and five were dry holes. Among the new field wildcats, Imperial Woodbend No. 1, north of Leduc, discovered what is probably a new pool. Of the approximately 165,000,000 acres comprising the Province of Alberta, approximately 41,000,000 acres are currently held under lease or reservation.

HISTORY OF THE CONTINENTAL SHELF OF THE GULF OF MEXICO

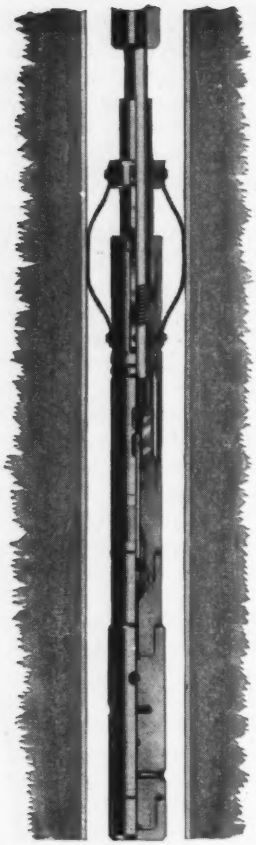
Paul Weaver, National President, A.A.P.G., Houston, Texas

Some authors consider the shore line as a hinge line with the land surface uplifted and the shelf downwarped. The author shows that this is by no means the general case and especially described the geology of the shelf in the Gulf of Mexico.

JASMINE OIL FIELD

Robert W. Casey, Pacific Oil and Gas Development Corporation, San Francisco, Calif., and Fred Sperber, Consultant, Bakersfield, Calif.

This field was discovered by Pacific Oil and Gas Development Corporation, July 25, 1946, upon completion of Cantleberry No. 72-5 pumping 84 B/D of 13.5° gravity oil from the interval 2763-2794 feet in the Lower Vedder zone. At present there are seven producing wells in the field.



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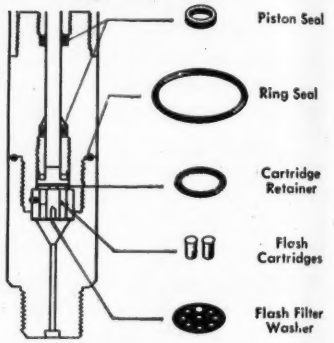

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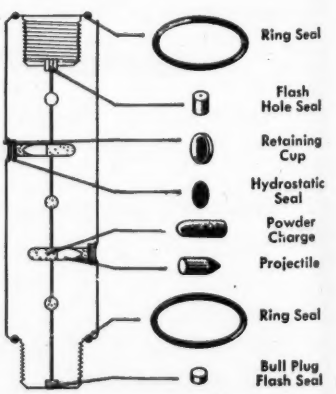

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GUIJARRAL HILLS DISCOVERY

J. Q. Anderson, Barnsdall Oil Company, Bakersfield, Calif.

Commercial production was obtained by the Barnsdall Oil Company from Guijarral Hills on September 19, 1948. The producing sand is apparently a large lentil in the so-called "Leda zone" in the upper part of the Kreyenhagen shale formation. Productive limits of the "Leda sand" as well as the oil possibilities of the Eocene-McAdams sand will be determined by future drilling.

THE OTHER HALF OF THE WORLD AND ITS OIL

T. L. Lenzen, General Manager Eastern Hemisphere Operations, Standard Oil Company of California, San Francisco, Calif.

Mr. Lenzen's address was concerned with a businessman's impressions of the political and economic conditions abroad, the threat of communism, the Marshall Plan and the importance of petroleum. He also presented information on the present operations and future plans of the various oil companies operating in the Middle East and East Indies.

TERTIARY GEOLOGY AND PRINCIPAL OIL FIELDS OF BURMA

H. R. Tainsh, Senior Geologist, Burmah Oil Company, Limited.

A brief description was given of the principal geological features of Burma and of the Tertiary structural history. More detail was given of the central Tertiary basin in which are situated the main oil fields.

The oil fields described in this paper were (a) Chauk and Lanywa which are on one major dome, but separated by the Irrawaddy River, and (b) Yenangyaung to the south. Some details were given of stratigraphy, structure, development and general sand chacteristics. Indications were given of the nature of the crude and of a number of problems met with in these oil fields.

The question of source rocks was briefly discussed.

THE MIOCENE-PLIOCENE BOUNDARY IN THE LOS ANGELES BASIN FROM THE VIEWPOINT OF THE MICROSTRATIGRAPHER

Stanley G. Wissler and F. D. Crawford, Union Oil Company, Los Angeles, Calif.

Wells drilled in the central portion of the Los Angeles basin normally penetrate an unbroken depositional sequence from the Upper Pliocene into the Mohnian stage of the Upper Miocene. For some twenty years oil company microstratigraphers have placed the Miocene-Pliocene boundary at the base of the continuous occurrence of such typical Repetto foraminifera as **Karreriella milleri** Natland, **Hopkinsina hispida** (Schwager), **Bulimina rostrata** Brady, etc., and at the approximate upward limit of **Rotalia garveyensis** Natland, **Uvigerina hootsi** Rankin, and a related costate **Uvigerina.** Furthermore, there is a pronounced change in the preservation of the forams as the tests of the Miocene forms are generally so badly crushed by compaction that only a small portion of the fauna can be extracted by washing. Many foraminiferal species are common to both the Lower Pliocene Repetto and the Upper Miocene Delmontian, and in the Delmontian there are rare intermittent occurrences of some of the more typical Lower Pliocene forms.

There is no marked lithologic break at the boundary, but the Miocene shales in general tend to be more laminated, and short intervals of hard, platy, "poker chip" type shale are frequently encountered a short distance below the contact. Platy shales become more abundant with depth, and the color gradually changes from the dominant hair brown of the Lower Repetto to the dark chaetura drab of the Upper Miocene. In the laminated Miocene shales, the foraminifera normally are concentrated in thin layers, while in the more massive Pliocene shales they are rather evenly distributed throughout the matrix.

The following papers will be abstracted in the second issue for November.

THE CORRELATION OF GRAVITY ANOMALIES WITH SEISMIC AND GEOLOGICAL DATA IN CALIFORNIA

P. F. Clement, Western Gulf Oil Company, Bakersfield, Calif., and G. R. Watson, Gulf Research and Development Company, Pittsburgh, Penn.

REVIEW OF SOME WARTIME STUDIES OF EXPLOSIVE PHENOMENA

R. A. Peterson, United Geophysical Company, Incorporated, Pasadena, Calif.

A NEW SYSTEM OF SEISMIC EXPLORATION

Thomas C. Poulter, Stanford Research Institute, Stanford University, Palo Alto, Calif.

THE OSCILLATORY CHARACTER OF SEISMIC PULSES

C. Hewitt Dix, California Institute of Technology, Pasadena, Calif.

PHILIPPINE EXPLORATION PROBLEMS

J. L. Soske, Geophysical Engineering Corporation, Pasadena, Calif.

COMPARATIVE INTERPRETATION OF AIRBORNE AND SURFACE MAGNETOMETER DATA

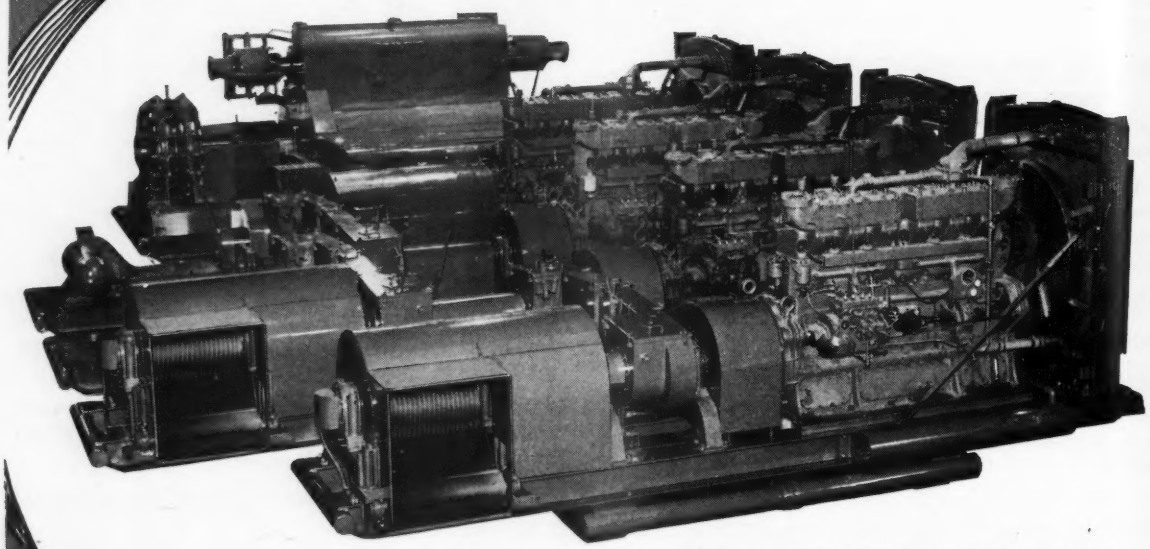
Wayne Hoylman, Fairchild Aerial Surveys, Incorporated, Los Angeles, Calif.

THE BLAST DAMAGE CLAIM RACKET

H. M. Engle, Structural Engineer, San Francisco, Calif.

For DRILLING to 18,000 ft.

USING 4½ IN. DRILL PIPE



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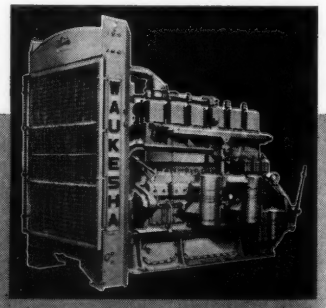
● It's a BIG rig—SUPER POWERED for really deep drilling—with four fast flexible Waukesha Power Units. They're smooth and responsive, these Model 6-LROU units—6 cylinder, 8½ x 8½ in. bore and stroke, 2894 cu. in. displacement—developing an aggregate maximum of 1600 horsepower burning natural gas.

Recommended by its makers for drilling to a maximum of 18,000 feet, using 4½ inch drill pipe, the Wilson Super Titan Rotary Drawworks is equipped with two pump drives and a double rotor 40 inch hydromatic brake. Pump clutches, master clutch and rotary clutch are the air tube type. Drum and transmission and catheads are air controlled and the four Waukesha Power Units are equipped with air throttle controls.

Oil field reliability is built into these big 6-LROU units — with removable wet sleeve cylinders, using separate cylinder heads mounting spark plugs and large valves; seven 4¼ in. main bearings; full pressure oiling and every other modern design feature. Get Bulletin 840.

Left (carburetor) side
MODEL 6-LROU
gas or gasoline power unit.



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Relationship Between The Oil Company and The Drilling Contractor

W. C. MacMillan
Vice President
Continental Oil Company

There are many reasons why I am pleased at the opportunity to appear on the program of the American Association of Oilwell Drilling Contractors, an association which, I am told, represents drilling contractors who do approximately 90% of all the contract oilwell drilling in the United States. Crude oil is the life blood of our business. In the nearly ninety years since oil was first discovered in the famous well near Titusville, Pennsylvania, (which well, by the way, was drilled by an independent contractor), we have developed no other commercial means for extracting the crude oil from the ground other than by drilling holes in the ground. In 1947 the petroleum industry spent approximately one billion dollars and cut 113 million feet of hole in searching for and developing this crude oil life blood of our business. Oilwell drilling contractors own 75% of the 3,200 rotary rigs in the United States and during 1947 they drilled 80% of all the wells drilled during the year. Of the industry's total footage of 113 million feet and total drilling costs of approximately one billion dollars in 1947, I believe it is a fair assumption that approximately ninety million feet were cut by drilling contractors and that about $800,000,000 were spent on wells on which there were contract tools. These cost figures include, in addition to cutting the hole, expenditures for mud, water, fuel, and other similar expenditures which are not paid to the contractor; nevertheless, the contractor carries the responsibility associated with the expenditure. It is a high compliment to the oilwell drilling industry that the producers so readily turn over to the contractors the primary responsibility to expend 800 million dollars annually.

When I was asked to talk to your Association, I chose to speak on the relationship between the oilwell drilling contractor and the producer. I chose the subject because it is one on which my job has given me some definite convictions. What I have just been saying, it seems to me, emphasizes that this relationship is one of extreme importance to both parties. With 80% of the oilwell drilling being done by contractors, the relationship between the contractor and the principal must be close. It must be effective. A lot depends on it.

W. C. MacMillan

I am pleased to note that the certificate of incorporation of your association lists among the objectives "the improvement of the relationships between the oil producing companies and the oilwell drilling contracting companies and to improve and increase the value of the services rendered by the latter to the former." Whether it is significant or not I do not know, but I was also pleased to observe that this objective is listed in the certificate of incorporation ahead of the objective providing for closer relationships between the drilling contractors themselves. If your association had no other objective than to improve the relationship between the oil producing companies and the oilwell contracting companies, it would, in that alone, have ample justification for a constructive existence.

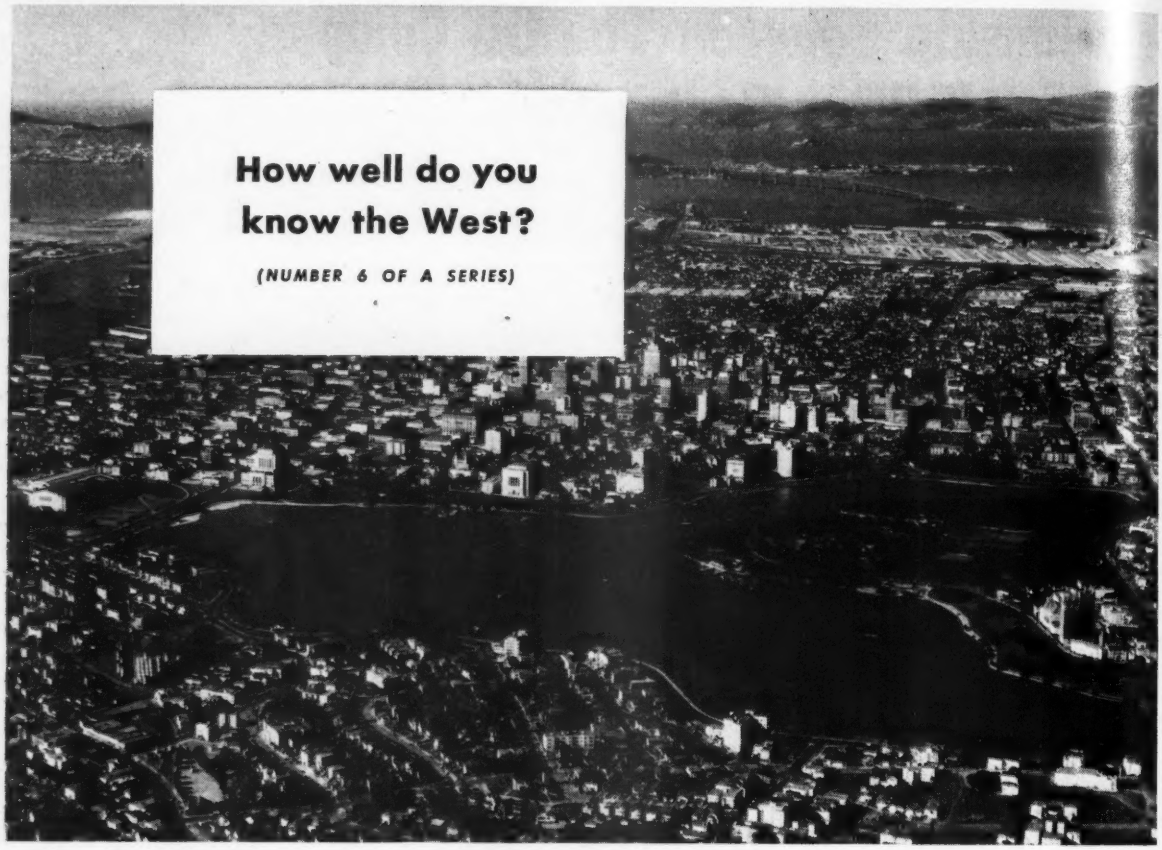
One of the most impressive facts about the oil producer—drilling contractor relationship is that few real disputes arise. Of course, there are small differences, however, lawsuits between the producer and drilling contractor are so infrequent they are almost negligible. This is doubly significant when considered with the frequency of occasions where the drilling is well under way and sometimes completed before the contract is signed.

There is another significant matter in the relationship about which we are talking. The oilwell drilling contracting business is unique in that it serves only one business, the business of the oil producer. I can think of no segment of other industries, comparable in size to the oilwell drilling business, which devotes itself exclusively to serving a single, specialized industry.

There is still another factor bearing upon the relationship between the producer and the drilling contractor which should be mentioned and that is that a large number of the drilling contractors are also producers. Some of your number have developed production on such a scale that you have almost lost identity as drilling contractors. In any event, the ever present prospect that many of you may some day join the ranks of producers is a factor which serves to intensify the contractor's interest in the producer's problems.

In view of what I have said up to now, we are justified in making one conclusion about the oilwell drilling contractors and oil producing companies: Each has a vital stake in the economic well-being of the other.

But my subject contemplates that I should be a little more specific about this relationship. Let us examine the merchandise which the oil producer buys from the drilling contractor. First, the producer buys



What Place Is This?

Whether you recognize the picture or not, consider these clues:

Clue No. 1 This area is comprised of eight cities that taken together form a continuous community running for more than twenty miles.

Clue No. 2 Because this area has an excellent climate, abundant natural resources, and favorable transportation it has been called "The Natural Industrial Center of the New West".

Clue No. 3 One of the largest Universities in the United States is located here.

Clue No. 4 Many progressive industries of this area depend upon the Great Western Division of The Dow Chemical Company for essential chemicals of unvarying uniformity and quality—manufactured in the West to serve the West.

Answer: Metropolitan Oakland Area. Clues supplied by that area's Chamber of Commerce.

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CHEMICALS FOR THE WEST COAST

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THE DOW CHEMICAL COMPANY
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DOW
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the use of specialized equipment, equipment for which he does not have continuous need, and therefore, finds it undesirable to own when it can be secured through a contractor. Second, the producing company secures from the contractor the services of skilled workmen —workmen who know how to handle the specialized equipment. Finally, the contractors furnish the supervisory "know how" which directs the skilled workers on specialized equipment in the accomplishment of the desired end result —a complete well.

So, we see that the relationship of the contractor to the producer can be looked upon as the relationship between a seller and buyer and, as is always the case in this sort of relationship, its continuity depends upon whether the product is worth the money.

There is also one other consideration—the question of company operated tools. Regardless of whether the service or product furnished by the contractor is worth the money he charges for it, the oil producer has the obligation to his shareholders and to the consuming public to determine whether he can, by owning his own tools and maintaining his own crews, drill wells at a lower cost. To the producer who drills only a few wells or whose wells are widely scattered, there is little doubt that the contractor can drill wells for him cheaper than he can drill his own wells. His relationship with the contractor then reduces itself to one of trying to determine which contractor will give him the best product and at the most reasonable price. But where the oil producer has a lease situation which will permit steady drilling in a fairly consolidated area, that operator must then consider what his own costs would be if he should own and operate his own tools. Oil producing companies must do everything possible to reduce costs—all costs—but particularly drilling costs which constitute so large a portion of their budgets. This obligation is owed not only to the owner of the business, but to the general public. If the cost of oil well drilling should be suddenly reduced by 10%, it would not mean that the oil producer's profit would be increased that amount. Some of this saving would represent increased profit, to be sure; however, competition at the product sales end would cause a substantial part of it to be taken up in reduced prices to the public.

The larger companies are, or can make themselves, less dependent upon drilling contractors than are the smaller producing companies. But again the record speaks highly for the drilling contractor because so many companies, each drilling several hundred wells per year, find it unnecessary to own a single rig. These companies, including my own, are relying wholly upon the drilling contractors but must, nevertheless, keep their costs down so that they can continue to compete in the industry at the exploration end, at the producing end, and at the product sales end.

I have been talking a lot about costs and you are probably wondering if the program should have said I was going to talk about costs—so you could have stayed away. Costs are the central key to this entire matter of our relationship. And let me say here that when I speak of costs, I am not talking about the contractor's profit.

No intelligent producer will deny the contractor a reasonable profit but, for the reasons which I have already mentioned, no intelligent producer can disregard his drilling costs. It sometimes appears that some drilling contractors fail to realize that the oil producer has a responsibility to keep costs down.

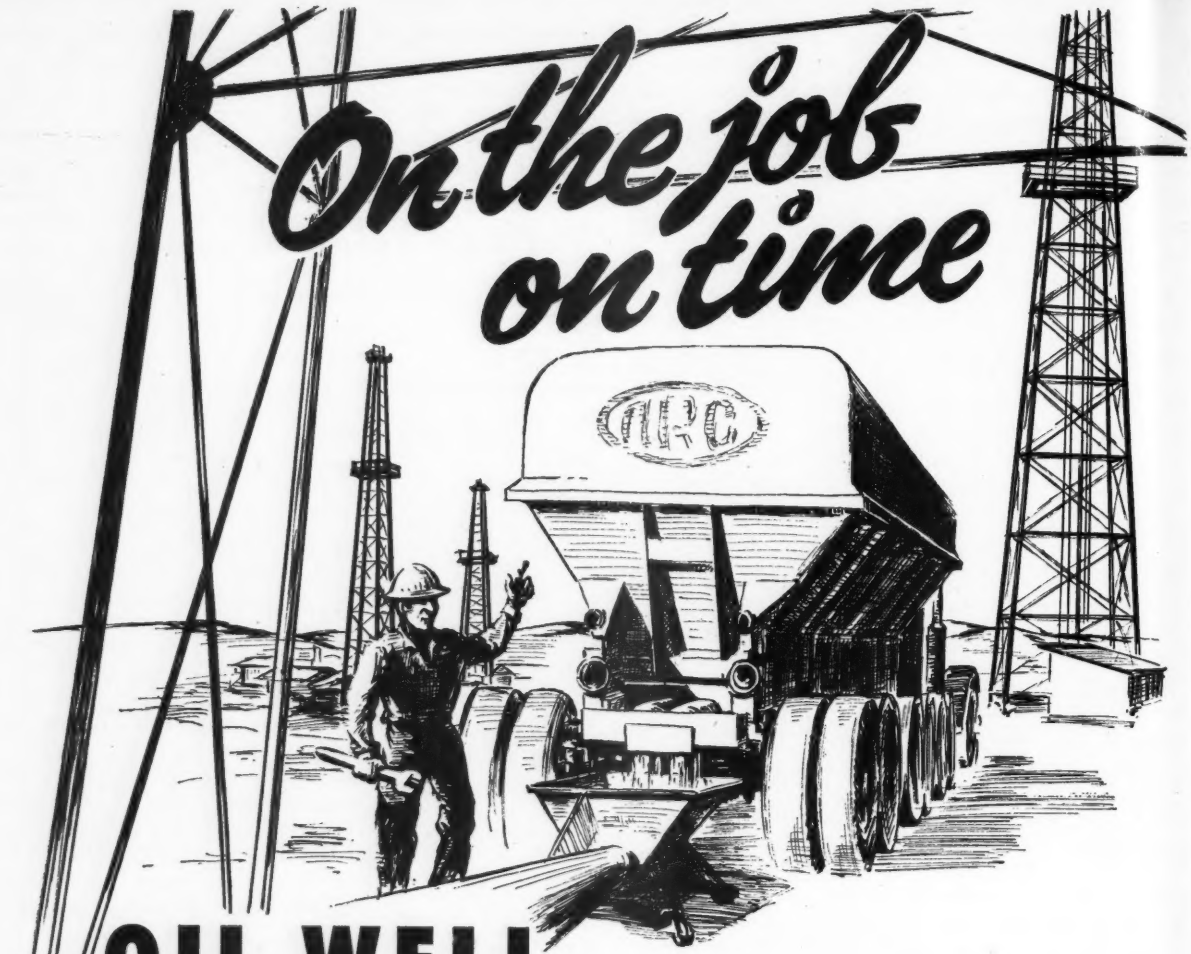
I have the responsibility of seeing that the wells drilled for my company are drilled at a cost no higher than the cost of other companies; and that the costs are comparable or better than those which we could develop with our own rigs. I must base my decision on facts. These facts can be developed in two ways. We can run a few of our own rigs and develop our own costs for comparison with contract costs or, we can request analyses of costs from the contractors who work for us. We have been following the latter course, and I am happy to say that the contractors have been very cooperative. If companies are to continue to rely exclusively upon contract tools, they not only need a close and cooperative relationship with the contractors, but also, the contractors must themselves take steps to see that their own accounting procedures are adequate to reveal to them what their costs are, where they might be pared and that they are in such form as to permit ready analysis by the oil producers who are served by them.

Since the drilling contractor furnishes a service which is such an integral part of the producers operations, there are other items upon which the producer may, with reason, expect to prescribe standards.

The contractor should provide intelligent supervision, by men, who, in addition to knowing how to drill and complete wells, also know the producer's problems sufficiently well to recognize the occasions when the producer should be consulted.

It goes without saying that the oil company will insist that the contractor maintain a neat rig and follow the latest approved practices of the drilling industry so as to reflect credit upon both the company being served and the drilling contractor's organization. Speaking for Continental Oil Company, we take almost as much pride in the cleanliness and neatness of a contract drilling rig on one of our jobs as we do of the leases which we operate. The contractor who will not maintain a neat rig finds it very difficult to secure work where he is competing with contractors who do maintain neat rigs.

Safety is another matter to which the drilling contractor must pay special attention. All of us in the producing end of the business have been pleased to see the steps which this association has taken in promoting safety on drilling rigs. Accidents increase insurance rates, and, consequently, ultimately in-



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Oil Well Cementers serving the industry have learned that PERMANENTE OIL WELL CEMENTS are available 24 hours a day—7 days a week—WHERE and WHEN they need it.

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crease the cost of drilling and completing wells. So, we have an economic as well as a humanitarian basis for our insistence that drilling contractors reduce accidents. The careless, indifferent contractor who holds safety as a secondary importance can not possibly compete with the contractor who recognizes that safety is of primary importance.

The drilling contractor must provide training for his personnel to develop the basic skills necessary to handle his equipment properly. His men should receive training to acquaint them with the place which drilling occupies in the over-all industry. They should receive training which will equip them as they progress to pusher and superintendent jobs. They should receive training which will enable them to analyze and use the cost statements of drilling wells. They should be given every opportunity to improve themselves, as this will result in an improved contracting organization. Here, again, costs are the important thing. The men should be trained to be cost conscious and they should be furnished the information which will let them apply cost consciousness. Too many organizations—and this is not peculiar to the drilling contracting business—keep fine cost records at headquarters, but fail to furnish them to the men on the firing line where cost knowledge can result in cost reductions.

The drilling contractor must do his part in the over-all job of making the public aware of the importance of the petroleum industry in general. The drilling contractors, as individuals and as an association, can do an effective job in creating favorable public relations. The drilling contractor contributes an essential ingredient of the indispensable service which the industry renders to the public and he must assume a corresponding part of the task of selling the industry story to the public.

The trade journals have, from time to time, reported on the steps which are being taken to organize a research program for the purpose of developing improvements in drilling. Success in this program will permit drilling to greater depths at lower costs. The drilling contractors should, individually and as an association, actively participate in this program so that the ideas, thoughts, and experiences of drilling contractors can be contributed to the program.

Right at this time the industry is embarking upon one of the most significant ventures in its recent history—the drilling program off the shores of Louisiana and Texas. This general geological province, which we refer to as the continental shelf is a very promising potential domestic source of crude oil which we can see today. A similar situation exists off the coast of California. But exploration, development and operations are going to be very expensive, the most expensive part will be the drilling. Offshore drilling, after rigging up, is no different from drilling on shore, except for the incidentals such as housing and transportation of personnel, mud storage and similar matters. In so far as the actual cutting of the hole is concerned, there is no difference whatever. The pre-spudding activity is extremely complex, however. The building of the drilling platform is an engineering problem and calls for an organization experienced in building docks, wharves, bridges, etc. Another part of the problem with which the producing industry has had little previous experience—at least in this country—involve marine equipment. If oil is found the operation of the wells, the gathering and storage of the oil and transporting it to market is going to introduce many more complex problems.

The companies who will be engaged in this offshore drilling would much prefer to be able to contract with one organization to perform the entire job—from preparing the

New officers of American Association of Oilwell Drilling Contractors elected at the eighth annual meeting in Houston are, left to right standing: Zach K. Brinkerhoff, Jr., Brinkerhoff Drilling Company, Vice President for Rocky Mountains; Karl L. Kellogg, K. L. Kellogg & Sons, Compton, Vice President for California; H. L. Rowley, Big Chief Drilling Company of Mississippi, Shreveport, Vice President for Cretaceous & Tertiary Basins; retiring Association President E. C. Brown; Brad Mills, Executive Vice President; J. Doyle Settle, Secretary; and D. B. Ferguson, Ferbanta Drilling Company, Carmi, Illinois Vice President for Cable Tools.

Seated, left to right, are: Louis A. Beecherl, McDaniel & Beecherl, Dallas, Treasurer; C. F. Whaley, Chet Whaley Well Servicing Company, Houston, Vice President for Well Servicing; J. V. Dunbar, Dunbar Drilling Company, Salem, Illinois, Vice President for Illinois, Michigan, Indiana & Kentucky; Joe S. Morris, Allen & Morris, San Antonio, President; Al Buchanan, Al Buchanan Drilling Company, San Antonio, Vice President for Gulf Coast; A. W. Thompson, Thompson-Carr, Inc., Houston, Vice President for West Texas and New Mexico; and Marion S. Church, Dallas, General Counsel.

Officers not shown are: Frank M. Porter, Fain-Porter Drilling Company, Oklahoma City, Vice President at Large; and R. W. Wire, Loffland Brothers Company, Tulsa, Vice President for Central Mid-Continent.

drilling platform to completing the well. It seems that it should be to the best interest of the drilling contractors, in protecting their present position in the industry, to join forces and provide the nucleus around which competent independent drilling organizations for contracting for offshore drilling could be created. The relationship between the producer and the drilling contractor—that relationship of interdependence—is such that the contractors should want to be the ones to handle this problem and the producers should be happy to pay them adequately to do so.

The capital to be spent in offshore drilling constitutes a real jackpot. Of course, no one can say with any degree of certainty just what the ultimate production from offshore pools will amount to—or what the cost per well and the recovery per well will be. To get an idea, however, of the amount of money to be spent in this offshore drilling, a few conjectures are justified. The large scale expenditures of money and effort which are going into offshore exploration on the Gulf and California coasts, particularly in the face of recognized high development and operating costs, justifies the conclusion that the companies engaged in this work are hoping to find ten to fifteen billion barrels of oil—possibly more. Even at a recovery of a half million barrels per well, it will take thirty thousand wells to produce fifteen billion barrels of oil; and this can mean thirty thousand blue-chip drilling contracts. If we entertain the further conjecture that the development costs can be reduced to—two hundred thousand dollars per well, we arrive at an overall drilling expenditure of six billion dollars. Certainly, this is a jackpot worth going after. Certainly, the oil producers would be well served to have the same group which does 80% of its onshore development, take a corresponding place in the offshore work.

In 1859 one hundred per cent of all the oil wells were drilled by contract drillers. At one time in the history this percentage got as low as 50%; now it has built back up to 80%. To make this percentage go higher, or even to hold the percentage at its present high level, the drilling contractors must furnish adequate facilities, competent supervision and skilled crews which should be constantly improved and strengthened so that the contractors can always furnish to the producers what they need to drill the wells and at less cost and with less trouble than the producers themselves can do the job.

In passing, I should like to comment that although I have seen a great deal written and have heard a great deal spoken about the wonderful job which the petroleum industry did in oiling our industrial and war machines during the last war, I do not recall that the drilling end of the business has received the particular recognition it so justly deserves for its splendid contribution. And it was a splendid contribution. With few rigs being produced, with repair parts difficult and at times impossible to secure, with much inexperienced help and inferior bits—not to mention the multitude of problems in connection with priority, draft deferments, and similar necessary nuisances,—there is no question but that the oil industry can be proud that by the war's end, it was drilling an annual average of 28,000 wells per year as compared with an annual average of 26,000 wells in the ten years prior to the war.

Low costs, safety, careful supervision, and assistance in public relations—all are part of the contractor's job for the producer and the industry generally. But the final cost is the main yardstick in measuring performance. The satisfactory relationship between the contractor and producer depends on getting the job done properly—at a reasonable cost.

(This address was presented at the Eighth Annual Convention of American Association of Oilwell Drilling Contractors, held at the Rice Hotel, Houston, Texas, October 11-13, 1948)

Blackwell & Sundae, Inc., Long Beach, well pulling contractors at Continental Southern Corp.'s Long Beach well, S.I.C. No. 121-W, left to right: D. G. Wheat, well puller; Earl Kelly, well puller; W. Bergher, well puller; F. L. Hunter, operator.

Inglewood Well Works

Mud is being conditioned preparatory to running casing in Basin Oil Company's Inglewood Comm. No. 8-1 on Sec. 28-2s-14w at Inglewood. No. 12-1 on the section has reached 3117 ft. and is running whipstock. Standard's Baldwin-Cienega No. 414 on Sec. 17-3s-14w is drilling and spot coring at 4654 ft.

Personalities IN THE NEWS

Roach Elected President of Columbia Steel

Benjamin F. Fairless, President of United States Steel Corporation, recently made the following statement:

Alden S. Roach

"Effective November 15, 1948, Alden G. Roach, now President of Consolidated Western Steel Corporation, will succeed J. Lester Perry as President of Columbia Steel Company, the steel-producing subsidiary of United States Steel Corporation on the Pacific Coast. Mr. Perry, formerly President of Carnegie-Illinois Steel Corporation, was called back from retirement on May 1, 1947, to assume the presidency of Columbia following the sudden death of its President, William A. Ross. After November 15, 1948, Mr. Perry will remain with United States Steel, serving in an advisory capacity.

"For the last eight years Mr. Roach has been President of Consolidated Steel Corporation, which recently became a subsidiary of United States Steel under the new name of Consolidated Western Steel Corporation. Mr. Roach will continue as President of Consolidated Western Steel.

"The principal office of Columbia Steel Company is at the Russ Building in San Francisco. The headquarters of Consolidated Western Steel Corporation will continue to be at Los Angeles."

Gordon Jackson, Vice-President and General Manager of the Eastman Oil Well Survey Company, was one of the principal speakers Tuesday night, October 12th, at the Society of Tool Engineers Convention, held in Los Angeles at the Biltmore Hotel.

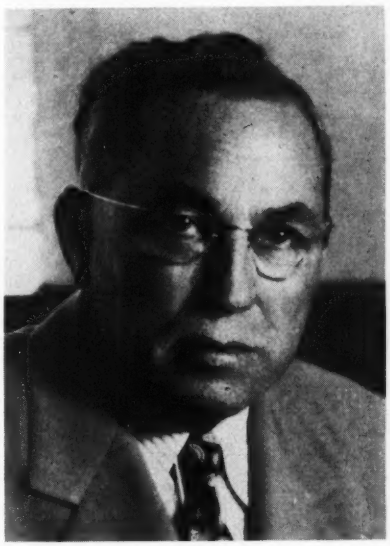
Mr. Jackson's talk, illustrated with slides, was on "Directional Drilling Achievements and Accomplishments." He made the trip from Denver to Los Angeles for the occasion at the invitation of the program committee for the convention, and he reports the sessions were well attended and many new interesting developments in the industry were discussed.

M. B. "Muz" Standing, California Research Corporation, La Habra, California, has been appointed General Chairman of the Pacific Coast District of A. P. I., spring meeting to be held in Los Angeles next May 12-13, 1949, according to announcement by Lot Bowen, Pacific Coast District Chairman of American Petroleum Institute Division of Production. Standing reports that committees to handle the meeting are now being selected.

J. Ben Carsey, assistant chief geologist for Humble Oil & Refining Company at Los Angeles, was a principal speaker at the regional meeting of the American Association of Petroleum Geologists in Mexico. He flew back to Los Angeles by Compania Mexicana de Aviacion, Pan American Airways affiliate.

Paul Cavins in Mid-Continent

Paul Cavins, founder and General Manager of the Cavins Company since 1929, is on an extensive tour of Cavins Company and Cavins Corporation offices and service shops throughout the Mid-Continent and Gulf Coast fields. Primary purpose of Mr. Cavins' tour is to gather on-the-job performance data of Cavins Tools used in clean-out and fishing operations. Particular attention is being given the Cavins Champion Junk Snatcher, a single run, hydrostatic multiple-action junk pick-up tool that runs on drill pipe or tubing.



Paul Cavins

A comparatively new Cavins development, the Champion Junk Snatcher has enjoyed considerable success in clearing wells of junk prior to making hole or coring with diamond bits, as well as in recovery of large and small junk in both drilling and production wells.

Mr. Cavins' plans are to increase the availability of Cavins tools in remote areas while at the same time standardizing the use of accessories so that virtually all bottom hole

junk fishing operations can be handled in a minimum of time and expense to the operator.

Mr. Cavins' tour includes Odessa, Midland, Kilgore, Houston and Corpus Christi, Texas, and a swing up through Oklahoma and the Rocky Mountain areas.

Fred W. Shield Elected President of I.P.A.A.

Fred W. Shield, San Antonio, Texas, was elected president of the Independent Petroleum Association of America at its 19th Annual Meeting held in San Antonio September 27-28, 1948. He succeeded Merle Becker, executive vice president of W. C. McBride, Inc., St. Louis.

Fred W. Shield

Fred W. Shield is a Texan by birth, having been born at Old Milburn in San Saba county. His early education was in the county schools of this area, this being followed by high school at Millersview. His early business career was devoted to ranching and stock farming and he has carried this interest over into the present, being well known as both a rancher and a quarter-horse breeder.

Shield, well known as an active independent operator in southwest Texas has been in the oil business since 1926. At that time he operated from Burkett, Tex., with his interests being largely in Coleman and Callahan counties. His first ventures were shallow wells, and because of the success with these he expanded and entered the west Texas play. During the latter time he operated from Abilene, Midland and San Angelo, moving to San Antonio in 1939 where he has maintained headquarters to the present.

He is at present a producer of crude oil in Ector, Duval, Refugio, Bee, Nueces, McMullen, Jackson and Goliad counties in Texas. His producing operations are handled by his own organization, and in addition to this activity he is also engaged in the royalty business.

An active independent, and recognized as a leader in the industry, Shield was elected vice president of the Independent Petroleum Association of America for Southwest Texas, and served both on the Executive Committee and as a Director. He also served as president of Texas Mid-Continent Oil and Gas Association through election in 1945.

Thomas E. Jordan has been added to the staff of the Western Oil and Gas Association as economic analyst. He will work on highway finances, taxation and other statistical activities. John M. Payne has joined WOGA as ordinance field man. His duties will embrace maintaining contact with municipalities and other local governmental bodies relative to proposed and enacted ordinances affecting oil.

His many friends were saddened at the recent death by accident of John William Blaney, 54, of Newhall, superintendent of production for Standard of California in the Ventura County fields. He was killed in a collision between his light coupe and a construction truck, nine miles north of Ventura.

Mrs. Ethel Kellogg, secretary for Thomas W. Simmons of Bolsa Chica Oil Corporation, is vacationing by visiting the great cities in Britain and the continent. She wrote to friends last from Paris, France.

A. C. (Bert) Mattei, president of Honolulu Oil and Robert N. Williams were the recent recipients of official thanks from the City of Santa Barbara for their help in developing an emergency source of water. The work of the oil men brought official praise from Mayor Norris of the Channel City.

"The finest tribute I can pay to you is acknowledge that the five wells drilled pursuant to your recommendations were all successful," he said. "As a result of the abundant production obtained the city was able to remove after August 1 all restrictions on the use of water."

Nancy Abrams, daughter of popular oil man, John McClelland Abrams, was married November 11 to Tony Jackson.

Independent Exploration has formed a subsidiary corporation known as Intex Oil Company with headquarters at Dallas, Texas. L. W. Saunders is president, L. R. Seaman and J. L. Milburn, vice presidents, and H. E. Rickard, secretary-treasurer. Directors are Saunders and Seaman and J. C. May, J. H. Beach and Thomas A. Knight. Initial operations of the new corporation are centered in Oklahoma and Texas.

C. A. Johnson of Los Angeles, Holly Development Company, was reelected vice president for California of the Independent Petroleum Association of America at the organization's annual meeting at Houston. W. C. Whaley, Barnsdall Oil, was reelected to the executive committee.

Sixteen Union Oil Company employees who have been with the firm for 35 years or more were honored at the annual thirty-five year party. Climaxing the day's activities, which included a trip to the original Union Oil Building in Santa Paula, was a banquet at the California Club in Los Angeles marking the company's 58th anniversary. Special honor was paid John E. Reed of Orcutt, first man in the company's history to attain 45 years of service. Reed is drilling superintendent at Orcutt. Among others receiving recognition for their long service were George H. Anderson, Arthur C. Roseman, Horace Cattermole and Frank L. Pyle, of Los Angeles.

Ray Poole, South American Manager for Security Engineering Company, Inc., recently flew in from Caracas, Venezuela for a visit at the Whittier plant and also attended the American Petroleum Institute meeting in Chicago.

Mr. Sidney Belither who has been in charge of Shell's Pacific Coast operations since 1934 has announced that he will retire on December 31, 1948.

In view of Belither's retirement and in line with the current trend, arrangements are being made more closely to integrate the Pacific Coast operations of the company with the activities East of the Rockies. Under these arrangements, responsible for the coordination of activities on the Pacific Coast, will be P. E. Lakin, who will move from New York to San Francisco. Lakin's career, which started with Shell on the Pacific Coast in 1915, has brought him in touch with all parts of the United States. Since 1942 he has been in the Head Office of Shell in New York as vice president in charge of Marketing east of the Rockies.

This unification of management functions headquartered in New York will in no way curtail Shell's Pacific Coast activities. Production, manufacturing, sales, purchasing, and other activities of the company will be conducted as in the past. In fact, it is expected that the full utilization of the nationwide resources of the company will aid in the further expansion of business in all departments on the Pacific Coast.

P. W. Mettling was the guest speaker at the regular monthly meeting of the California Natural Gasoline Association at the Rio Hondo Golf Club. Manager of the Los Angeles office of the Cooper-Bessemer Corporation, Mettling discussed "Some Aspects of Gas-Diesel Engines."

Clifford Hancock, who recently joined Richfield Oil Company, has returned from a trip to the Hawaiian Islands. Hancock formerly was associated with the Caminol Company in Los Angeles.

Al H. Heller, widely known petroleum engineer and geologist, and his bride have returned to Los Angeles from a honeymoon trip to Lake Tahoe and Northern California points of interest. Mrs. Heller is the former Dorothy Jump, granddaughter of the late James Jump, a founder of the Los Angeles Jonathan Club. George Temple, father of motion picture star Shirley Temple, was Heller's best man at the wedding ceremony held in Los Angeles.

Samuel Moody Haskins, 76, attorney and director of Union Oil Company, died at his Los Angeles home. He was senior member of the law firm of Gibson, Dunn and Crutcher, with which he became associated in 1903. For several years he was president of the Associated Alumni of the University of California. Mr. Haskins for four successive years was president of the California Club. His father was the late Rev. Mr. Thomas W. Haskins, one of the early clergymen of the Episcopal Church in the state.

Edwin W. Pauley, president of the Petrol Corporation and co-owner of the Los Angeles Rams football team, has placed on ice plenty of moose meat. He recently bagged one of the giant animals on the first shot at the remarkable range of 350 yards in the Jackson Hole country, Wyoming. The moose's antlers spanned 48 inches, just two inches short of the world record.

R. L. Minckler, president of General Petroleum, and W. C. Mullendore, president of Southern California Edison, were re-elected board members of the National Industrial Conference Board for the coming year at the board's meeting held at New York.

Foreign Guest at the October Meeting of the Los Angeles Chapter of Nomads. Seated, left to right: Florent H. Bailly, Gilberto Capriles, T. C. Vandenberg and O. M. Hulsey. Standing, left to right: C. D. Hendershott, B. R. Wall, Roy J. Tribbey, Jr., G. H. Atkins and James R. Gregath.

LAUGH THIS OFF!

Golfer (trying to get out of a trap): "The traps on this course are really annoying, aren't they?"

Second Same (attempting to put): "Would you mind closing yours?"

In New Orleans they tell of a northerner who walked into a bar, declaimed loudly that the French Quarter was smelly, the women ugly and the streets shabby.

But after one long pull on a Sazerac, a local drink, he thawed a bit. "I guess maybe a few of the girls here are pretty."

He ordered a second Sazerac and a few minutes later observed: "The French Quarter does have a sort of charm to it."

He ordered a third Sazerac, tossed it down, and pulled out a $100 bill. "Gimme my change in Confederate money."

He: My treasure!

She: My treasury.

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"But why do you still wear the ring he gave you?"

"Oh, my feelings toward the ring are still the same."

He: "Every time I kiss you, it makes me a better man."

She: "Well, you don't have to try to get to heaven in one night."

"The doc says I've been working too hard. Suggests I get a little sun and air."

"But, honey, didn't you tell him we can't afford one yet?"

Felicia: I didn't accept Jim the first time he proposed.

Mary: No, dear, you weren't there.

Traffic sign in New York village: "Slow, no hospital."

She: Darling, did you ever try to sell vacuum cleaners?

He: No, of course not.

She: Well, you'd better start now —that's my husband coming up the walk.

Poor Philosopher: "It's hard indeed, to lose all of one's relatives."

Wealthy Man: "Hard? It's impossible!"

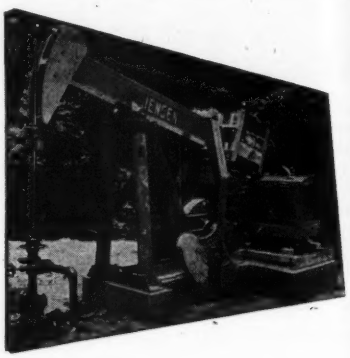
Lecturer: If I've talked too long, it's because I forgot my watch and there's no clock in this hall.

Voice from the rear: There's a calendar on the wall behind you.

Doctor: "I want to make a change in the death certificate of Mr. Whiffiejigger."

City Clerk: "Anything wrong?"

Doctor: "I signed my name in the space marked 'cause of death'."



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Los Angeles Basin

Boyle Heights Trial Planned

Boyle Royalties Company has been granted permission by the Los Angeles City Planning Commission to drill for oil on 250 acres in the Boyle Heights district. The area is roughly within the bounds of Mott and Fourth streets and Brooklyn and Indiana avenues in Los Angeles.

The well site will be at Lorena and First streets, approximately one mile northeast of Richfield Oil's Community No. 17-1. This earlier test was abandoned some months ago, after exploring to 4700 feet. A total of 300 ft. of oil sand was reported picked up. The sand, however, was encountered only as stringers, a geological condition not conducive to development of commercial production.

Following the unsuccessful hunt for oil at that location, Richfield and Boyle Royalties quitclaimed a total of 1100 acres they jointly controlled in the area. The individual return of the latter to the district is on ground considered more favorably situated, with property under lease probably covering the entire structure.

Boyle Royalties' drilling venture will be designed to meet all of the exacting regulations called for by the municipal model drilling ordinance. Rig will be noiseless and soundproof and the area will be free from open sump holes or any other disfigurement possible of marring the landscape.

Newhall Well Cements Pipe

Barnsdall Oil has landed and set casing at 14,509 ft. in its RSF No. 66-7 in the Newhall-Potrero field. Total depth is 14, 513 ft. RSF No. 77-5, meanwhile, is drilling and spot coring at 8800 ft.

Orange County Trials Progress

In the Fairview area of Orange County, Standard of California is drilling ahead at 6038 ft. in its Turley No. 1 wildcat on Sec. 4-6s-10w, after successfully recovering drill collar and bit. Seaboard Oil and Universal Consolidated's Christianson No. 1 near Placentia on Sec. 5-4s-5w is drilling below 3700 ft.

Chino Hills Tests Okay

Water shut off was okay on test of Hancock Oil Company's Abacherli No. 1-A on Sec. 12-3s-8w in the Chino Hills of San Bernardino County. The hole is bottomed at 2187 ft. and casing set at 1907 ft. Grayco Oil Company's Grayco No. 2 on Sec. 13-3s-8w is drilling shale at 1955 ft.

La Habra Try Cores

Having resumed operations, G. B. Finch is now coring ahead at 8390 ft. in his Hilo-Cinnabar No. 1 on Sec. 1-3s-11w in the La Habra area. The project is designed to search for oil in the Miocene.

Montebello Well Pumps

Rothschild Oil Company of Santa

Terminal Drilling Co. contractors for Standard Oil Co. well L.A.I. 1-99, in the Inglewood Field, rear row, left to right: J. G. Hubbard, cathead; Neil Larsen, pipe racker; V. L. Anderson, driller; front row, H. H. McIntire, lead tong; A. R. Westcott, derrick.

Fe Springs has given the final touch to its Wheeler No. 4 in the Montebello area. The try came in on the pump from 2730 ft. for an initial output of 45 barrels a day.

Lawndale Well Cased

Seaboard Oil's Seaboard-Pauley No. 83-20 on Sec. 20-3s-14w in the Lawndale field is standing with casing cemented at 8094 ft. Total depth is 8213 ft. and top oil sand placed at 8104 ft. Seaboard's Seaboard Community No. 1 on Sec. 17-3s-14w is drilling shale at 5450 ft.

Brea Well Swab Testing

Pacific Western Oil is running swabbing test in its Brea Comm. No. 2-1, a slant drilled hole on Sec. 11-3s-10w in the Brea area, Orange County. The hole is down 8476 ft.

Newhall Try Flows

In the Placerita area near Newhall, Nelson-Phillips Oil Company has completed its Kraft No. 5 on Sec. 31-4n-15w flowing 35 barrels of net oil daily from 605 ft. R. W. Sherman's Newhall Comm. No. 3-1 on Sec. 2-3n-16w at Newhall is making hole ahead at 5529 ft.

Cajon Pass Try Skids Rig

Cajon Oil Company, Ltd., has skidded rig 40 west from its Ray No. 1 on Sec. 36-3n-6w in the Cajon Pass area of San Bernardino County and is ready to spud Ray No. 1-A. The No. 1 went to a depth of 1002 feet and when 12-in. casing collapsed at 1000 ft., the company decided to move over and start a new hole.

Aliso Canyon Test Redrills

Standard of California is redrilling at 5395 ft. with its Del Aliso No. 1-3 at Aliso Canyon, after going first to 7215 ft. Frew No. 1-6 test is making hole ahead in sand and shale at 7485 ft. Tide Water Associated's Fernando No. 32 is redrilling at 4555 ft. Old bottom was 7484 ft.

Athens Try Digs

In the Northwest Athens area, Shell Oil is drilling at 7550 ft. in its Union-Poindexter No. 2 on Sec. 12-3s-14w.

Turnbull Canyon Drilling Listed

Harry and Vivian Kline are understood planning to drill their No. 2-4 well on a lease in the North Turnbull Canyon area, which already contains three small producers. Location is on Sec. 11-2s-11w and in the vicinity of wells drilled some years ago by Continental and Capital Company.

Seal Beach Adds Producer

Completed on the pump, Shell Oil's A.H.C.-Bryant No. 1 on Sec. 34-4s-12w at Seal Beach started off at the rate of 400 barrels a day from 9562 ft. Standard has made location for San Gabriel No. 39 on Sec. 3-5s-12w.

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San Joaquin Valley

Bacon Hills Project Drills

Seaboard Oil is drilling ahead at 6565 ft. in its No. 37-21 on Sec. 21-28s-20e at Bacon Hills, with the objective probably expected near 9700 ft. A formation test of a shallow zone near 5900 ft. was not encouraging.

Kern River Wells Listed

Cleveland Oil Company is planning to drill two more wells on Sec. 36-28s-27e in the Kern River field. The new jobs will be known as David No. 1-1 and No. 1-4. Under terms of the lease, a total of 16 wells must be drilled to the shallow zones.

Edison Pumper

West of the Edison field, Independent Exploration Company has completed Alexis-Day No. 1 test on Sec. 18-30s-29e, pumping initially 10 barrels daily from 3664 ft. Perforations in the Chanac in the interval of 3631-3643 ft. are in line for washing.

Temblor Try On Calendar

B. F. DeLanty plans to drill an exploratory hole, three-quarters of a mile east of the Temblor field. Known as No. 3-31-1, location falls on Sec. 11-29s-21e.

Kern Bluff Try Coring

Vedder Petroleum's second test well at Kern Bluff, Vedder No. 12-2 on Sec. 12-29s-28e, is okay on water shut off test of 7-in. casing set at 1129 ft. The well, a quarter of a mile northwest of Oceanic-Universal Consolidated production, picked up oil sand at 1065 ft. and reasonably should be a success. Vedder's first test was abandoned last May slightly below 1200 ft. Gene Reid Exploration's Muri No. 1, a southeasterly extension test on Sec. 18-29s-29e, is making hole ahead at 453 ft. Standard of California's De Staute No. 1 on the same section has reached a depth of 950 ft. in gray sand. The Santa Margarita was topped at 915 ft.

McVan Adds New Drilling

B. & R. Oil Company has spudded in its Poso No. 5 on Sec. 14-27s-27e in the Poso Creek area. Location has been staked for well No. 6 in the section. The company's lease of 40 acres already embraces four producing wells. Well depths average 1225 ft., with output of each well between 15 and 20 barrels a day.

Pattiway Test Deeper

News is good from Petroleum Reserve Corporation's Klipstein No. 52-18 on Sec. 28-10-23w in the Pattiway area in Kern County. The project is drilling below 3350 ft. and a little higher is credited with oil and gas showings on the ditch.

Kings County Wildcat Starts

Shell Oil is planning a wildcat test on Sec. 12-24s-20e, Kings County. Location is about midway between the Trico gas field and Kettleman Hills Middle Dome. Shell many years ago drilled a brace of wells in the area. They had gas showings, but of the sub-commercial variety. In the Hall's Corner area, George F. Getty, II, is making progress in removing drill pipe fish from his Orangeville Community No. 1 wildcat on Sec. 27-18s-20e. Present depth of the well is 5164 ft.

Maricopa Try Moving Rotary

On the south edge of Maricopa, General Petroleum is moving out rotary equipment from its Sunset No. 363 on Sec. 2-11n-24w. Drilled to a total depth of 5192 ft., the well will be allowed to stand for a couple of weeks. Production crew then will enter the scene and probably bail the well.

Curry Mountain Wildcat Spudded

West of the southern tip of the Jacalitos field, Barnsdall Oil has spudded and is drilling ahead below 250 ft. with its Emme Government No. 1 on Sec. 35-21s-14e at Curry Mountain.

Gosford Try Digs

Hancock Oil is drilling sand and shale at 3325 ft. with its KCL No. 85-23 wildcat in the Gosford area in Sec. 23-30s-26e, Kern County.

In the Wilmington Field at Long Beach Oil Development Corp.'s well No. W-202, Pioneer Drilling Co., contractors, rear row standing: B. D. Willhite, driller; J. E. Miller, derrick; T. L. Fulton, cathead; front row, Russell Beckering, rotary helper; William Stephens, rotary helper.

Tejon Well Mapped Out

Ridge Oil Company plans to drill a well on Sec. 34-11n-19w in the Tejon area near the Grapevine, Kern County. The property, which formerly was held by the Hilo-Metzenbaum interests, contains several producing wells. On Sec. 32, Chanslor-Canfield Midway is preparing to drill a well. Interest in the well is shared with E. B. Hall and British-American Oil. A search will be made for production in the Reserve sand.

Elk Hills Reserve Drilling Programmed

The Navy is understood to have mapped out an extensive drilling program at the Elk Hills Naval Petroleum Reserve, with the development of shallow zones the prime objective. Reports intimate that more than 100 wells will be drilled in the next year or 18 months to the Stevens zone short of 7500 ft.

Blackwells Corner Wildcat Suspended

Independent Exploration and Woodward & Reynolds have signaled their intentions to drill another wildcat in the Blackwells Corner area of Kern County. Current questioning will be through the medium of the combination's Mabury No. 4 on Sec. 25-26s-18e. British-American Oil is drilling at 2760 ft. in its Beer B No. 85-21 wildcat on Sec. 21-26s-19e.

Cuyama Valley Work Widening

Bandini Petroleum Company appears to have uncovered much of interest with its Graham No. 2 wildcat on Sec. 33-11n-26w at Cuyama, approximately 10 miles east of Russell Ranch production. The project from about 1000 ft. to present depth of 1174 ft. encountered oil sand bodies of varying thickness. On drill stem test of the interval of 1116 ft. and present bottom at 1174 ft., gas blew and drilling fluid recovery showed oil colors. Coring has been resumed and additional tries will be run. The company holds about 1300 acres in the area.

Southern California Petroleum's Schlauderman No. 1 on Sec. 23-11n-28w is drilling ahead near 2100 ft. Drill site is a mile and one-quarter northwest of Richfield's Anderson-Colgrove wells. Richfield's Quality No. 31-31 on Sec. 31-11n-27w has been completed at 2950 ft. for an initial yield of 4000 barrels daily. Quality No. 88-31 has set casing at 3005 ft. Bottom of the well is 3260 ft. and a successful producer at this location would extend the White Rock sector one mile southeast. The well is equidistant between the White Rock sector and Russell district production in the field.

Guijarral Hills Adds Drill Jobs

Two more well locations have been staked in the Guijarral Hills area of Fresno County. Barnsdall Oil has staked location 660 ft. south of its discovery well. Standard is starting a well north of its Fee No. 35-7 drilling at 7650 ft. on Sec. 35-20s-16e.

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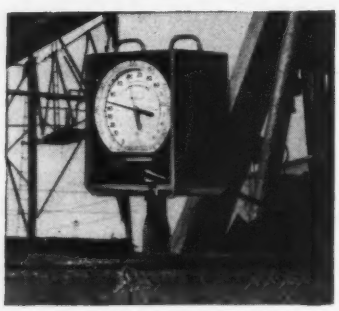

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A MARTIN-DECKER Production Model Weight Indicator can be placed anywhere you want it, at the brake, in front of the driller, over next to the line permanently attached to the mast, without danger of damage from dead line vibration or whip, and with it you can read your loads with precision in pounds. Equipped with super sensitive vernier for maximum sensitivity and readability.

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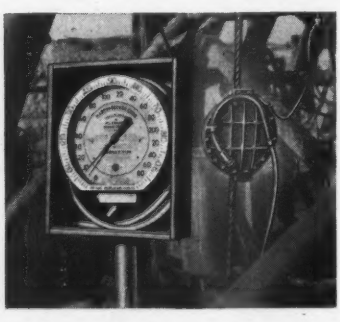

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Coastal and Northern District

Santa Rosa Island Wildcat Drills On

The Signal-Honolulu-Macco combination's Soledad No. 1 exploratory hole in projected Twp. 2-n-31w on Santa Rosa Island, 25 miles off the coast of Santa Barbara is drilling ahead near 1000 ft. The group of interests has the entire island under lease, with Signal Oil acting as the operating company. One test well was drilled some years ago on the island without notable success.

Incidentally, seismic blasting off the coast from Santa Barbara to Point Concepcion has been completed. Seismograph surveys seeking to delineate possible oil structures in subsea beds have been progressing in the area for a year.

Santa Ynez Test Drills

Ohio Oil Company is drilling below 1700 ft. in its Unit No. 1 wildcat near Santa Ynez Peak in Sec. 1-5n-30w, Santa Barbara County. The formation evidently is tough to drill.

Cat Canyon Zone Found

Considerable interest centers on Cat Canyon where General Petroleum's Los Flores No. 86-21 on Sec. 21-4n-33w confirmed discovery of a new zone by flowing oil from a finishing depth of 5037 ft. The interval of 4676 ft. to bottom is open to production.

San Ardo Well Starts

Jergins Oil and North American have staked another well at San Ardo in Monterey County. It is Orradre No. 165-11 on Sec. 11-23s-10e. The companies recently completed their Ferrini No. 63-11 on the section for an estimated 160 barrels daily from 2154 ft. Independent Exploration's Thurman No. 1 on Sec. 3-22s-9e has been abandoned at 1616 ft. The Jergins-North American No. 197-11 on Sec. 11-23s-10e is ready to pump from 2185 ft. It will extend production south about one-half mile. Texas Company's Orradre No. 2 on Sec. 13-23s-10e has reached a bottom of 3034 ft. and is running rods.

Monroe Wildcat Fishing Pipe

In the Monroe area of Monterey County, Texas Company is fishing drill pipe stuck in its Beedy No. 1 on Sec. 33-19s-7e. The company's Ringaman No. 1 wildcat on Sec. 35-20s-11e in the Peachtree Bow area is drilling and spot coring at 1800 ft. Barnsdall Oil's Kelch No. 1 try on Sec. 23-23s-10e is about to spud.

Bolinas Try Digs

L. M. Lockhart's R.C.A. No. 3-1 explorer on Sec. 26-1n-8w near Bolinas in Marin County is drilling shale at 1543 ft.

Yolo County Tests Drill

Shell Oil's Saxon Unit No. 1-1 test on Sec. 7-7n-3w in the Saxon area in Yolo County is drilling sand and shale at 4695 ft. At Winchester Lake, the company's Fraser No. 1 on Sec. 33-7n-4e is down 618 ft. and opening hole to run surface pipe.

Martinez Try Drills

At Martinez in Contra Costa County, Standard of California is drilling at 5576 ft. with its Fernandez No. 1 gas test on Sec. 21-2n-3w.

Guadalupe Try Works

Continental Oil is running rods and tubing in its Leroy No. 3 on Sec. 2-10n-36w in the Guadalupe area of San Luis Obispo County. The well was carried to a total depth of 2700 ft. and it apparently will make a fair producer. Work is starting on Leroy No. 4. Leroy No. A-1 on section, meantime, has spudded and is drilling around 500 ft.

Los Alamos Well Fishes

Amerada Petroleum's Tognazzini No. 1 wildcat on Sec. 14-8n-33w, north of Los Alamos, is fishing. Present depth is 7930 ft.

Sespe Explorer Drilling Ahead

Merchants Petroleum Company is drilling ahead below 700 ft. in its Bonebrake No. 1 test on a 420-acre lease on Sec. 6-4n-9w in the Sespe area of Ventura County. The property adjoins the company's Cochran lease.

E. B. Hall and Co. crew on Union Pacific R. R. well No. 127 in the Long Beach field, left to right, rear row: R. B. Strader, floorman; J. B. Schatzman, floorman; D. B. McKay, derrick; front row: C. L. Nordstrom, Jr. petroleum engineer, W. R. Beaudette, floorman; A Brawner, operator.

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Fig. 2150
DOUBLE WEDGE DISC, RISING STEM

FIG. 2153

Embodies all the features in Figs. 2150 and 2151, but its design is varied to provide non-rising stem operation. Body is the same thus requiring only an interchange of trimmings to convert from the non-rising stem to the rising stem valve.

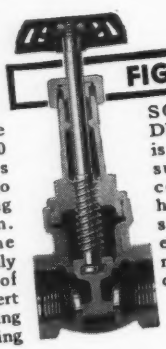

FIG. 2151

SOLID WEDGE DISC. The solid disc is ideal for services such as food processing lines and handling gummy substances, where entrapment of line materials within the disc is undesirable.

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West Mountain Venture Tests

In the West Mountain area of Ventura County, Ring Oil Company is testing water shut off at cementing point at 6000 ft. in its S. P. No. 1 on Sec. 23-3n-21w. Los Nietos Company and Lucy Smith Battson's No. 9 on Sec. 22-3n-21w is washing over fish. Present depth is 6855 ft.

Simi Well Proves Dry

Drilling efforts of Engineers Syndicate, Ltd., to uncover oil with its Strathearn-Coleman No. 1 wildcat on Sec. 12-2n-19w in the Simi area failed of their purpose and the project has been given up at 2540 ft.

Folsom Test Abandoned

Near Folsom in Sacramento County, Benjamin W. Vinetz has abandoned his Donnie No. 1 on Sec. 9-9n-6e. The project explored to a bottom of 2600 ft. and in so doing topped sandy shale at 1300 ft. From information gathered, formation from around 1300 ft. to bottom was unchanged.

Bardsdale Test Scene

Beloil Corporation, Ltd., is preparing to drill an Eocene test in the Bardsdale area of Ventura County. It will drill on Sec. 5-3n-19w and probably take a look at all formations to a minimum depth of 5500 ft.

Ventura Avenue Project Working

British American Oil Producing is ready to perforate the interval of 11,741-11,798 ft. in its Hartman-Barnard Unit No. 1 and conduct a swabbing test. Total depth is 12,950 ft. San Marino Oil Company's Capital Crude No. 8 on Sec. 7-3n-19w is drilling sand and shale at 5885 ft.

Santa Barbara Explorer Coring

Spot coring at 5950 ft. is the last word from Trans-Oceanic Oil's M'Divani No. 1 deep test on Sec. 28-4n-27w on the Santa Barbara Mesa.

Arizona Try Digs

L. M. Lockhart's interesting Babbitt No. 1 wildcat in the Black Mesa Basin, Coconino County, Arizona, continues to drill on down at a depth of 2850 ft. Digging currently is reported in the Supai formation.

Utah Oil Discovery

Western Natural Gas Company has made an important oil strike with its English No. 2 in the Boundary Butte area in Southeastern Utah. The well was reported producing at the rate of 60 barrels of 42.7 gravity oil daily from a sand just below 1500 ft. Location falls about 40 miles west of the Colorado line and within two miles of the Arizona line. Interest holders in the company are reported to include John Hay Whitney and the Whiteweld Company of New York.

Washington Wells Work

In the Grays Harbor area of Washington, Union Oil has abandoned its Weyerhauser No. 1 at 6608 ft. The company, meanwhile, is starting work on Bannse No. 1 in the Centralia area of the state.

Olivera Canyon Wildcat Drilling

Union Oil's McCroskey No. 5 wildcat test on Sec. 20-9n-32w in the Olivera Canyon area continues to drill on down at 4955 ft.

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West Newport Well Starting

Macoil Corporation has staked location for another drilling job on its Banning lease at West Newport. It will be No. 102 on Sec. 29-6s-10w.

Universal Inaugurates Lecture Series

Universal Oil Products Company has inaugurated a series of lectures to be delivered monthly at its Riverside Laboratories by outstanding scientists and technologists, to suggest and stimulate new lines of thought among Universal research workers.

The first lecture in the series was given on October 11, by Professor Carl S. Marvel, head of the organic division of the Department of Chemistry at the University of Illinois. His subject was "High Polymers," and involved particularly the chemistry in the polymerization of dienes in its relation to the production of synthetic rubber. The second lecture, on "Polycyclics," was delivered on October 25, by Professor W. E. Bachmann of the University of Michigan. The schedule of the coming lectures follows:

"Hydrides", November 16, Professor H. I. Schlesinger, University of Chicago.

"Petroleum Substitutes", December 13, Dr. H. H. Storch, Pittsburgh Experiment Station, U. S. Bureau of Mines.

"Silicones", January 11, 1949, Professor E. G. Rochow, Harvard University.

"Halogenation", February 14, Professor E. T. McBee, Purdue University.

"Role and Application of Reaction Kinetics in Analytical Chemistry", March 14, Professor I. M. Kolthoff, University of Minnesota.

"Peroxides", April 11, Professor M. S. Kharasch, University of Chicago.

"The Function of the Consulting Chemist", May 9, C. S. Miner, head of the Miner Laboratories and one of the directors of Universal.

Sargent Test Checking Shows

Gene Reid Exploration is ready to run electric log and check showings encountered to date in its Mayo-Hollister No. 1 test at Sargent in San Benito County. Present depth is 4893 ft. Location falls on Sec. 16-12s-4e on the old Rancho Lomerias Muertas. Recent successes in Cuyama Valley are held responsible for extensive leasing northward into San Benito County. Signal Petroleum and Lyle A. Garner are planning a drilling campaign on their 21,500-acre holdings five miles northeast of Bitterwater and just east of the San Andreas fault. Texas Company some weeks ago sank two wells in the Ciervo area of the county. They went to a point between 1200 and 1300 feet for only small production.

Coalinga Try Reams

Superior Oil Company has reached a depth of 1022 ft., with its S.P.L. No. 33-27 test on Sec. 27-19s-16e in the Northeast Coalinga area and is reaming. Drill site is about three miles east of the East Coalinga Extension field and is lands of the Southern Pacific Railroad. It is seven miles north of production recently opened up by Barnsdall at Guijarral Hills.

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Kettleman Hills Explorers Deeper

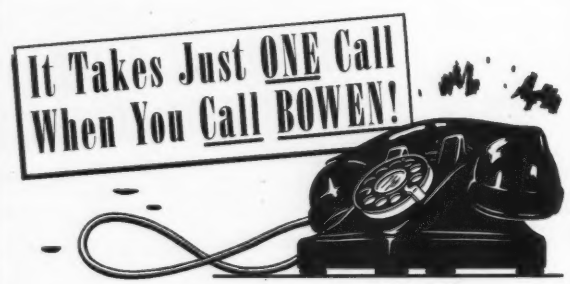
Middle Dome Corporation's No. 30V-52 test on Sec. 30-23s-19e at Kettleman Hills Middle Dome is drilling steadily ahead at 7450 ft. Standard of California's S. F. & F. L. No. 4-2 wildcat on Sec. 12-25s-19e at South Dome is ready to conduct water shut off trial. Casing is cemented at 12,310 ft. Total depth is 12,922 ft. and top of drill pipe fish at 12,438 ft.

Wyoming Try Starts Soon

Superior Oil of California has under consideration a prospect job in the Wallace Creek area of Natrona County, Wyoming. The property in line for possible testing is about 50 miles northwest of Pure Oil's West Poison Spider discovery, which found oil in the Frontier formation around 14,300 ft.

Texas Scores Tideland Well

Texas oil development in recent days was accentuated by showings in Stanolind Oil & Gas Company's test in the Gulf of Mexico, 15 miles east of Galveston, which promises to be the Lone Star state's first tideland well. Oil, gas and salt water were recovered on test between 1598 and 1604 ft. The showing of salt water was attributed to a faulty cement job. The operator at last reports was taking steps to recement the well and reperforate casing.



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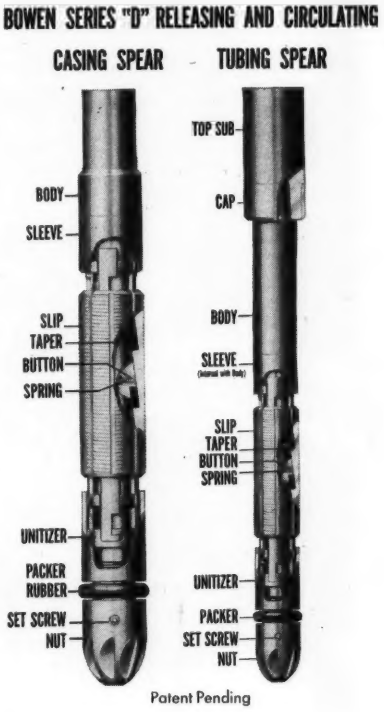
S. R. Bowen Co. Announces New Type Releasing and Circulating Spears

The S. R. Bowen Co. announces the Series "D" Bowen Releasing and Circulating Spears.

Series "D" Bowen Releasing Spears utilize novel Full Circle Slips that contact virtually the entire inner surface of a long section of the fish and in addition the entire inner circumferences of the Full Circle Slips are backed by tapers on the spear body. Consequently, when a fish is engaged and upward pull is exerted the expansion strain is spread so evenly over so much of the inner surface of the fish that there is no fish distortion. The company states that by overcoming the problem of fish distortion, Series "D" Bowen Releasing and Circulating Spears insure the operator that there will be no loss of engagement regardless of the degree of the upward pull and regardless of the intensity of the jarring blows. In tests with hydraulic jacks and on trial runs in conjunction with jars, pipe has been pulled and jarred in two below the Series "D" Bowen Releasing and Circulating Spear with no distortion of the fish at the point of engagement.

As their primary releasing mechanism, Series "D" Bowen Releasing and Circulating Spears provide means for hanging and supporting the Full Circle Slips in their uppermost position relative to the spear body. When in this position, the Full Circle Slips cannot be expanded against the fish by the tapers on the spear body and the spear can be easily withdrawn from the fish. As a secondary releasing mechanism, left hand wickers are cut on the Full Circle Slips to permit unscrewing from the fish. Series "D" Bowen Releasing Spears can be engaged with and released from a fish indefinitely without being withdrawn from the hole. Field tests have shown that the releasing mechanism of Series "D" Bowen Releasing and Circulating Spears is unaffected by excessive pulling strains, terrific jarring blows and adverse well conditions.

The manufacturer also states that all Series "D" Bowen Releasing and Circulating Spears are equipped with integral pack off rubbers to provide the ability to circulate through the fish and with mill type nuts to insure entrance into a battered or sand-plugged fish. These features eliminate the need for accessory equipment and they do not interfere with the spear's operation when they are not required.



Patent Pending

All Series "D" Bowen Releasing and Circulating Spears in drill pipe and tubing sizes are provided with skirt threads for installation of skirts and oversize guides when such accessories are necessary to insure alignment of the spear with the fish.

All Full Circle Slips are of the all purpose type having horizontal wickers for pulling and vertical wickers for right handing or left handing a fish.

Further, according to the company, all Series "D" Bowen Releasing and Circulating Spears are engineered to provide greater tensile strengths than the tensile strengths of the pipe sizes that they engage. Also, their designs are such that the Full Circle Slips will always collapse below the outside diameter of the Nut. This feature insures the spear's ability to release from any fish that it has penetrated. In addition, the Full Circle Slips encompass so much of the inner area of the fish that it is virtually impossible for any junk to fall alongside and foul the mechanism of the spear. Although the mechanism is such that each Full Circle Slip individually engages with and releases from the fish, a Unitizer is provided to make the slips work together in the event that a misshapen fish is encountered.

Because Series "D" Bowen Releasing Spears do not distort the fish, there is no movement under strain of the spear within the fish and consequently the Full Circle Slips can be subjected to great pulling and jarring strain with no wear whatsoever. Pipe and liners salvaged by Series "D" Spears are more usable because they are neither split nor distorted. The design of this spear eliminates completely the need for the slip carriers and belly springs that require frequent replacement on ordinary spears. Another time saving feature is the fact that slips can be changed without removing the Nut from the Body. Unscrewing the Nut a few inches permits the old slips to be removed and the new slips to be installed.

For further information on Series "D" Spears write S. R. Bowen Co., Santa Fe Springs, California.

Haering Opens New Texas Plant

D. W. Haering & Company, Inc. announce the opening of a unit in San Antonio, Texas.

This new plant will provide increased facilities for their rapidly growing business. Provision has been made for increased laboratory, operating and warehouse space. This will give faster service to the rapidly developing industrial empire in the Southwest—as well as providing an adjunct to Haering Service throughout the entire country.

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